



FIG. 1

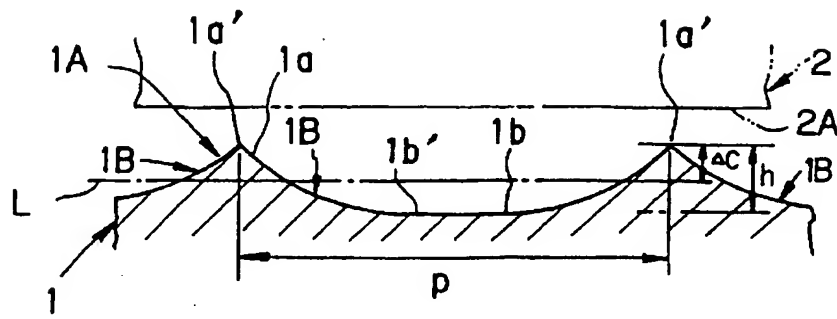


FIG. 2

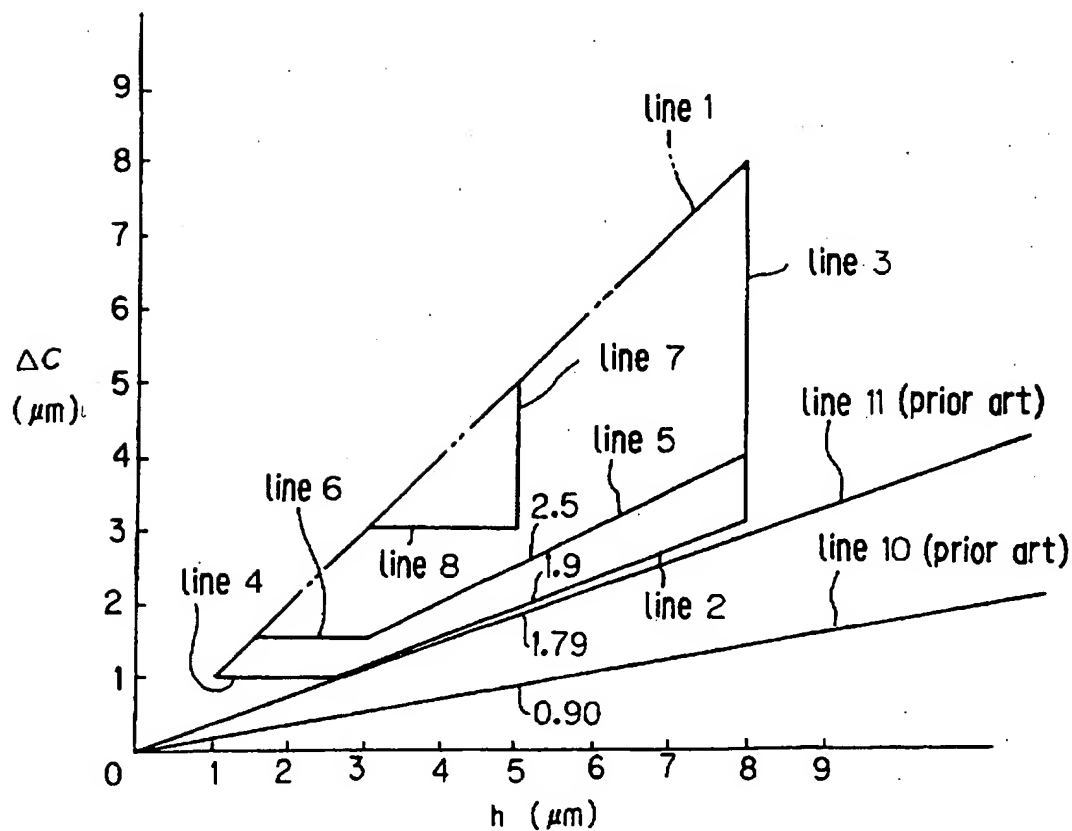
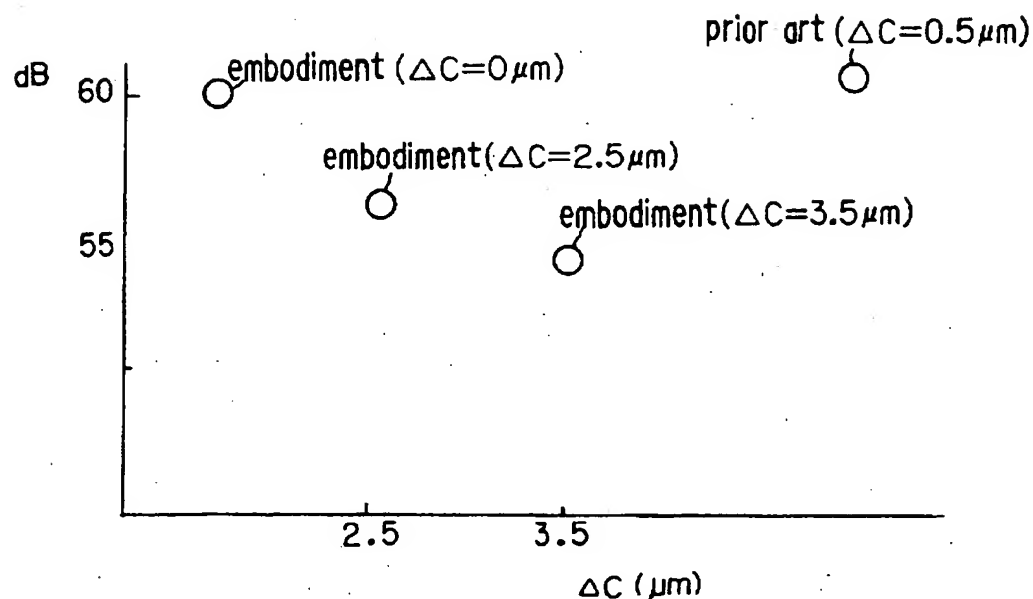
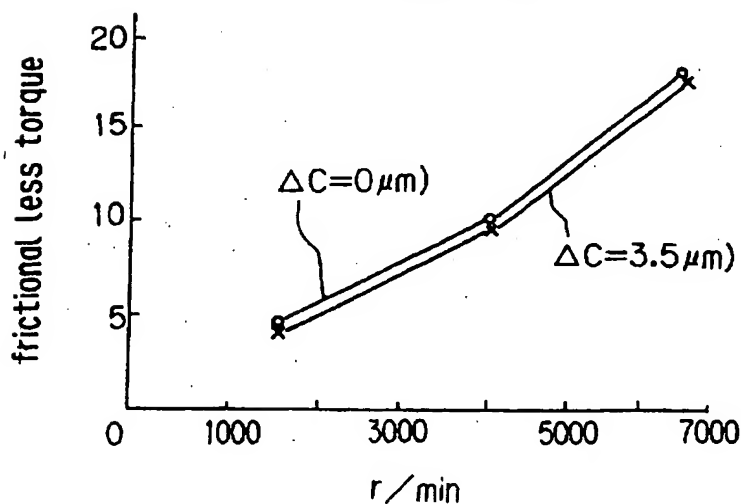


FIG. 3

condition of experiment :

sound pressure level from series four cylinder engine, when operated at 1500 rpm and half-load, is measured with a microphone.

FIG. 4

condition of experiment :

series four cylinder engine oil temperature of $80 \pm 1 ^\circ C$
oil variety 7.5w-30 oil clearance of $45 \mu m$

FIG. 5

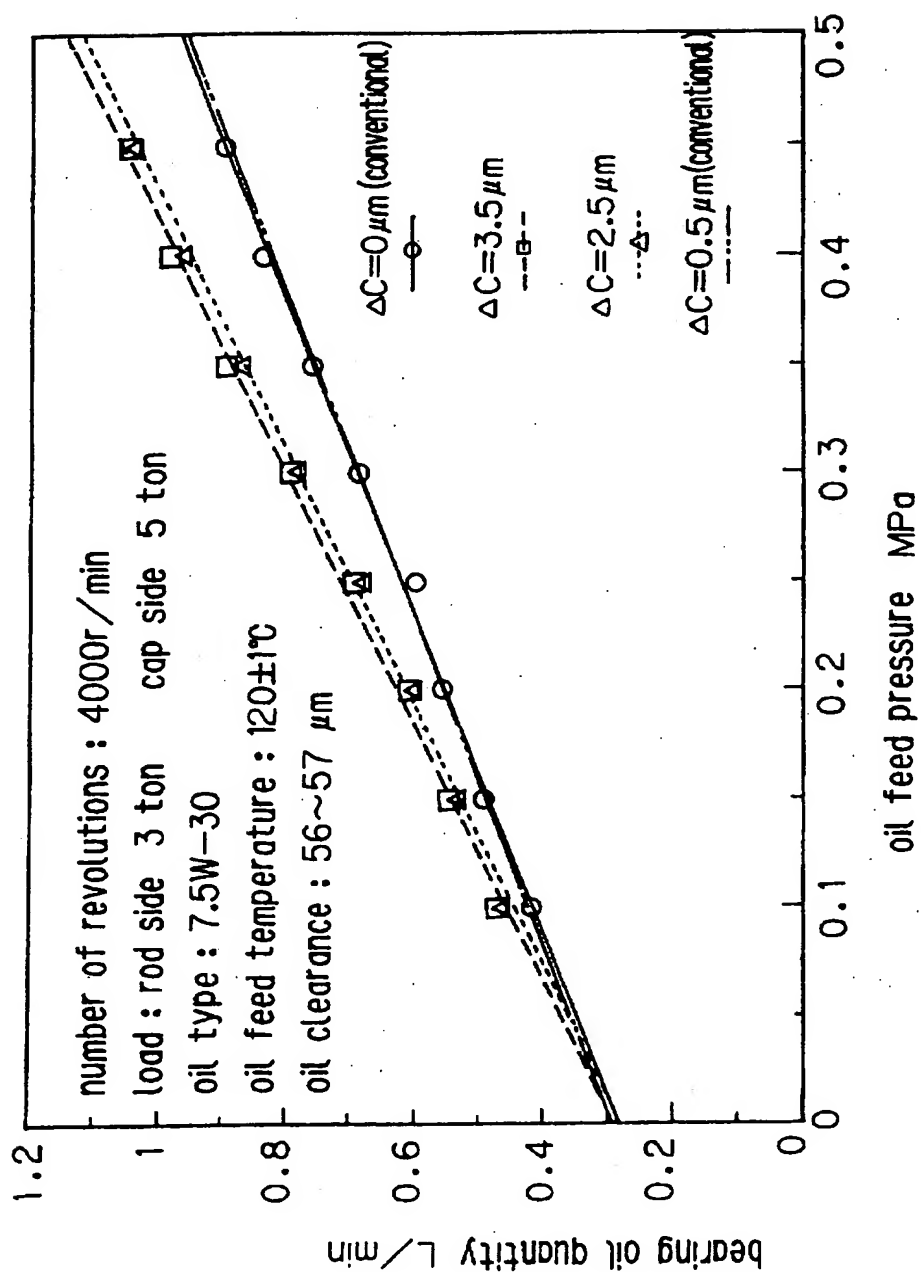


FIG. 6

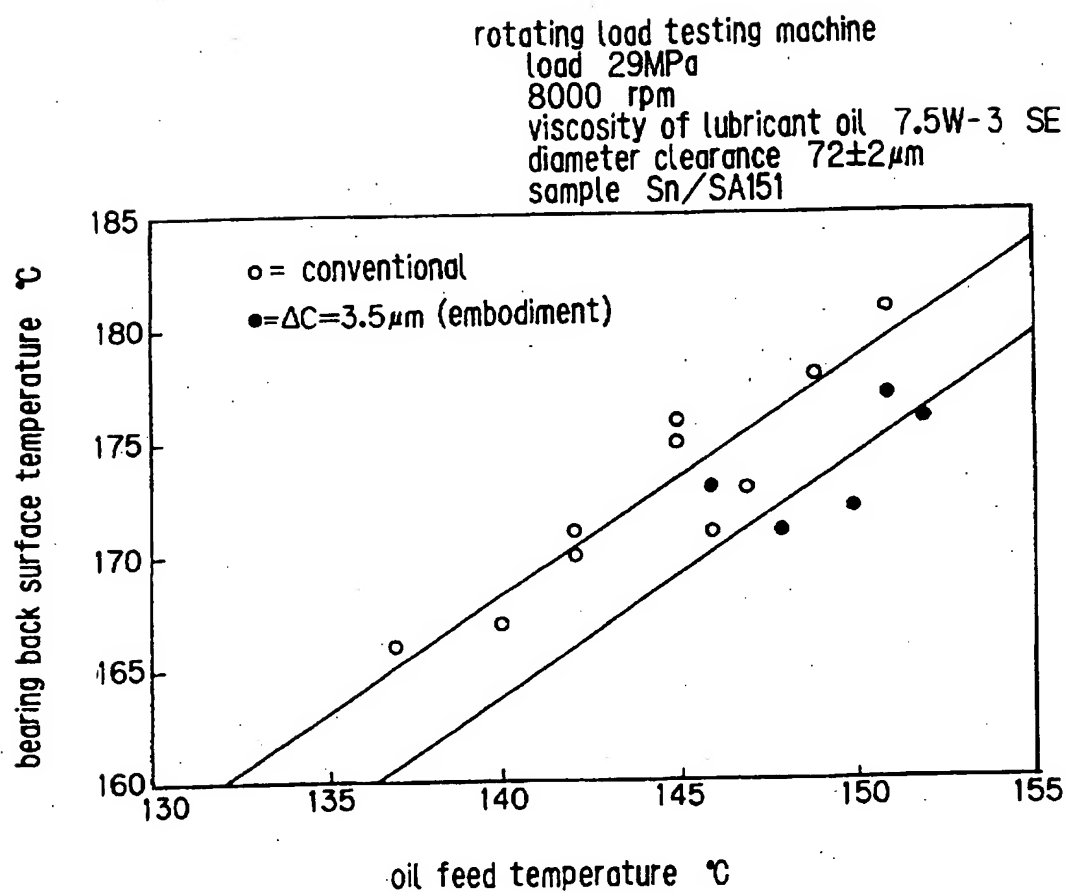


FIG. 7

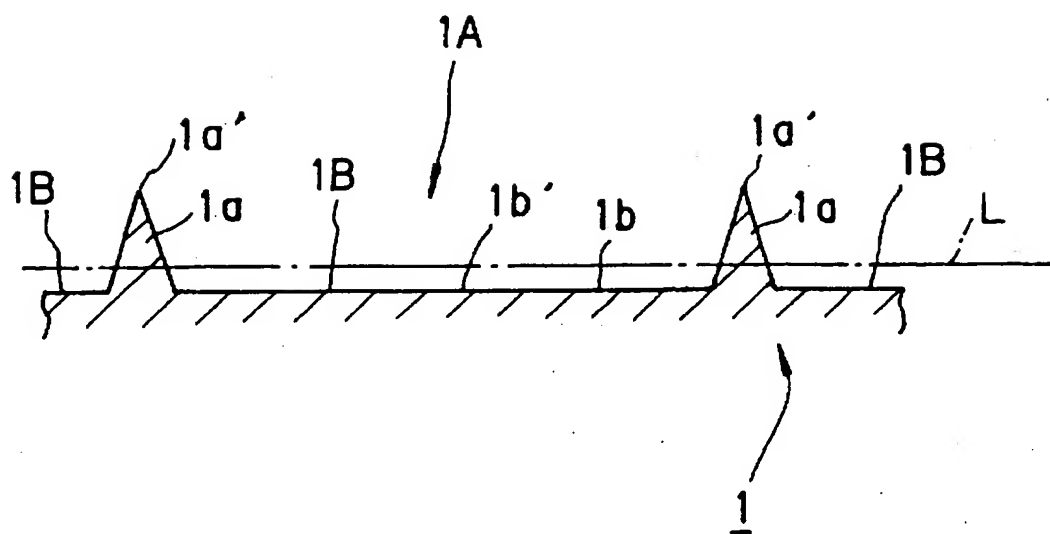


FIG. 8
PRIOR ART

